



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D3488-042
Job Sheet 172905



Part No: **D3488-042**

Job Qty: 6 ea

Part Name: Blade Fitting RH



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 2/22/18

Job Tracking No:

Due Date: 3/12/18

Created By: Logan David

Type: Stock

Description:

Note: DWG DSK 101 REV D, D3488 REV B IPP Rev:A New Issue 06-02-28 JLM IPP Rev:B As per Rev B 06-03-30
JLM IPP Rev:C Now On Doosan Lathe JLM Verified BY:DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup	Run	Workcenter / Supplier	Lead Time	
90	Start up Operation	6 Ea		3/9/18	0.00	0.00	Start Up Machining-2		<i>MJP 18/05/13</i>
100	Doosan	6 pcs		3/10/18	0.00	5.27	Doosan		<i>MJP 18/05/13</i>
110	QC	6 pcs		3/10/18	0.00	0.00	QC2 Machining-2		<i>MJP 18/05/13</i>
120	CNC Vertical Machining	6 pcs		3/10/18	0.11	4.11	HAAS1-3		<i>man 18/05/16</i>
130	QC	6 pcs		3/10/18	0.00	0.00	QC2 Machining-2		
140	QC	6 pcs		3/10/18	0.00	0.00	QC8 Machining-2		<i>MJP 18/05/22</i>
150	HandFinish	6 pcs		3/10/18	0.00	0.18	HandFinish1		<i>SA 18-05-22</i>
160	Powdercoat	6 pcs		3/12/18	0.00	0.21	Powdercoat1		<i>BE 18-05-22</i>
170	QC	6 pcs		3/12/18	0.00	0.00	QC3		<i>BE 18-05-23</i>
180	HandFinish	6 pcs		3/12/18	0.00	0.00	HandFinish4		<i>BE 18-05-23</i>
190	QC	6 pcs		3/12/18	0.00	0.00	QC5		<i>BE 18-05-23</i>
200	Packaging	6 pcs		3/12/18	0.00	0.00	Packaging3-1		<i>BE 18-05-23</i>
210	QC21-SA	6 Ea		3/12/18	0.00	0.00	QC21		<i>JAS</i>

Part Op 100 - 1-Turn as per Dwg DSK 101 & Folio FA625

Descriptions: 120 - 1-Machine as per Folio FA627 & Dwg D3488

160 - START TIME: *2:00*

180 - Install Inserts as per Dwg D3488

200 - LOCATION : FP001

FINISH: 3:20 - M13839

MAY 7 3 2018

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D6103-003	Round Billet, Aluminum	6 Ea (1 ea)	90-Start up Operation	
ALS7-1032-225	Insert	24 Ea (4 ea)	180-HandFinish	<i>5058/38</i>

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	D6103-003	6	9	0
180-HandFinish	ALS7-1032-225	24	1,078	0

Part Specifications

Specifications could not be found.

Plex 3/1/18 11:00 AM dart.logan.david

DART AEROSPACE LTD		Work Order:	172905
Description: Blade Fitting, RH / Turning Detail for D3488-1/-2		Part Number:	D3488-2
Inspection Dwg: D3488 / DSK101 Rev: B / D		Page 1 of 2	

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Lathe Section						
Ø2.150	+/-0.005	2,148	✓		HJP-04	✓
Ø2.780	+/-0.005	2,780	✓			
Ø3.125	+/-0.010	3,125	✓			
Ø3.346	+/-0.010	3,346	✓			
0.125 x 45°	+/-0.010 x +/-0.1°	0,125 x 45°	✓			
8.000	+0.030/-0.000	8,016	✓			
9.250	+/-0.010	9,250	✓			
0.188	+/-0.010	0,188	✓			
R0.032	+/-0.010	0,032	✓			
R0.062	+/-0.010	0,062	✓			
Ø0.297	+0.005/-0.001	0,300	✓			
Ø0.430	+/-0.010	0,435	✓			
0.100	+/-0.010	0,103	✓			
0.125	+/-0.010	0,126	✓			
2.620	+/-0.010	2,623	✓			
3.500	+/-0.010	3,500	✓			
1.005	+/-0.010	1,005	✓			
Ø0.484	+0.005/-0.001	0,487	✓			
1.180	+/-0.010	1,180	✓			
3.150	+/-0.010	3,150	✓			
3.070	+/-0.010	3,063	✓			
R0.063	+/-0.010	R.063	✓			

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Past Expiry Date ☐	Manufacturing Process ☐				
Misidentified ☐	Past Due ☐	OTHER :			

DART AEROSPACE LTD		Work Order: 172905
Description: Blade Fitting, RH / Turning Detail for D3488-1/-2		Part Number: D3488-2
Inspection Dwg: D3488 / DSK101 Rev: B / D		Page 2 of 2

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Milling Section						
Ø0.508	+0.006/-0.001	0.509	/		UG	mm L-05
0.750	+/-0.010	.750	/		↓	
1.500	+/-0.010	1.500	/			
11.18	+/-0.030	11.180	/			
R0.062	+/-0.010	0.062	/		RG	
0.125	+/-0.010	0.123	/		↓	
0.590	+/-0.010	0.588	/			
0.793	+/-0.010	0.798	/			
1.351	+/-0.010	1.347	/		Height	3/006
1.317	+/-0.010	1.315	/		micro	mm L-02
1.802	+/-0.010	1.804	/		Height	3/006

Measured by: [Signature]	Audited by: [Signature]	Prototype Approval:	N/A
Date: 18/03/13 / 18/05/16	Date: 18/05/22	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	06.03.31	New Issue	KJ/JLM	
B	08.09.19	Reformat P/O D3488-042	KJ/JLM	
C	08.12.02	Dimension 8.000 removed	KJ/JLM	[Signature]

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

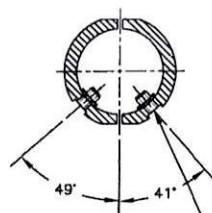
Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

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WORK ORDER

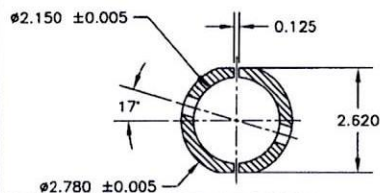
NO. 172905

20180222



SECTION B-B

Ø0.297
C'BORE Ø0.430 x 0.100
INSTALL ALS4-1032-225 (OR AKS4-1032-225)
OR ALS7-1032-225 OR AKS7-1032-225)
INSERTS AFTER FINISH
(4 PLACES)



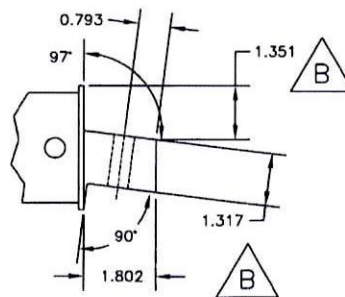
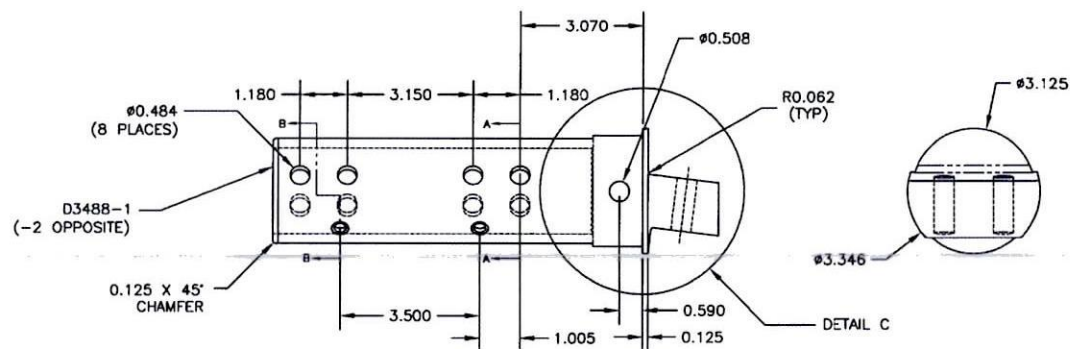
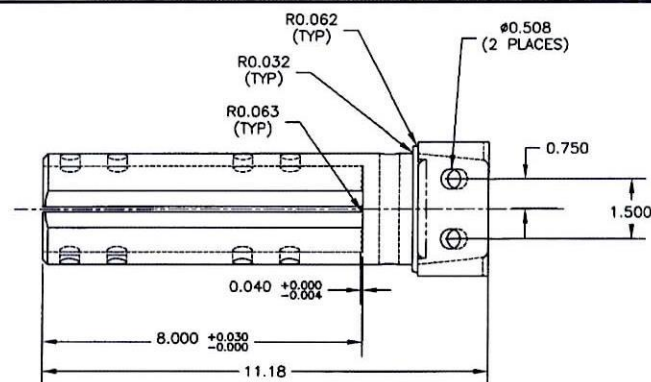
SECTION A-A

D3488-041/-042 BLADE FITTING ASSEMBLY PARTS LIST

QTY -041	QTY -042	PART NUMBER	DESCRIPTION
X		D3488-041	BLADE FITTING ASSEMBLY (LH)
	X	D3488-042	BLADE FITTING ASSEMBLY (RH)
1		D3488-1	BLADE FITTING (LH)
	1	D3488-2	BLADE FITTING (RH)
4	4	ALS4-1032-225 or AKS4-1032-225 or ALS7-1032-225 or AKS7-1032-225	INSERT

D3488-041/-042 BLADE FITTING

- MATERIAL: MAKE D3488-1/-2 FROM ALUMINUM 7075-T7351 ROUND BAR PER QQ-A-225/9 (REF. DART MATERIAL SPEC M7075T73R)
- FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1
POWDER COAT WHITE (REF 4.3.5.1) PER DART QSI 005 4.3
- BREAK UNMARKED SHARP EDGES 0.010 TO 0.020
- INSTALL INSERTS AFTER POWDER COAT
- ALL DIMENSIONS ARE IN INCHES
- TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED



DETAIL C

D3488-041 SHOWN (D3488-042 OPPOSITE)

RELEASED
06.03.15 PH
REV. 05
ECN #737

B	06.03.15	CHANGE THICKNESS
A	05.12.20	NEW ISSUE
DESIGN	PH	DRAWN BY PH
CHECKED	PH	APPROVED PH
DATE	06.03.15	TITLE
		BLADE FITTING

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DART DART AEROSPACE USA, INC.
PORT HADLOCK, MA

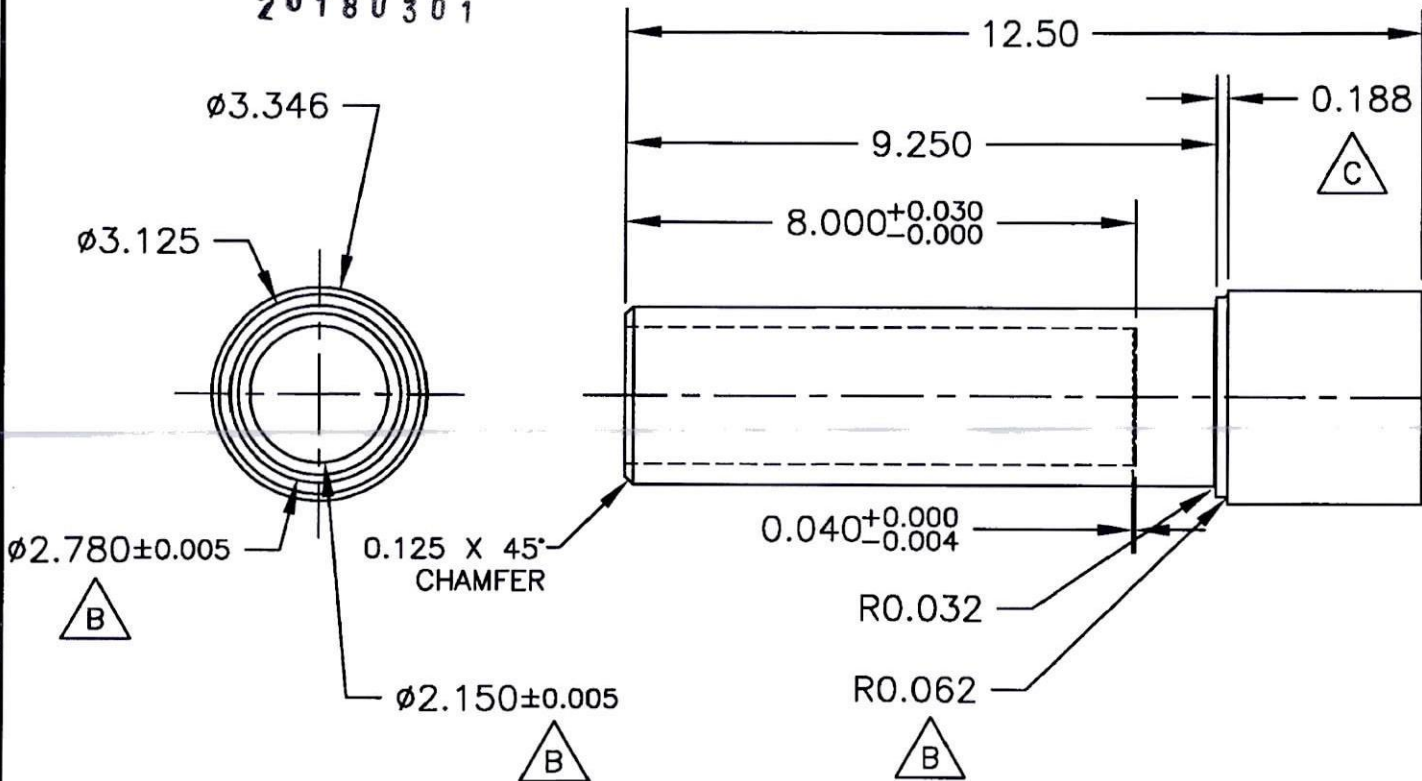
DRAWING NO. D3488
REV. B
SHEET 1 OF 1
SCALE 1:3

DART

DESIGN	DRAWN BY	DART AEROSPACE USA, INC.	
04	04	PORT HADLOCK, VA	
CHECKED	APPROVED	DRAWING NO.	REV. D
04	04	DSK 101	SHEET 1 OF 1
DATE	TITLE	SCALE	
06.05.09	D3488-1/-2 TURNING DETAIL	1:3	
A	05.12.21	NEW ISSUE	
B	06.03.02	ADD TOLERANCES AND RADIUS	
C	06.04.17	0.188 WAS 0.125	
D	06.05.09	REMOVE DIAMETER FOR CHAMFER	

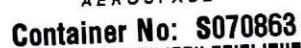
06.05.09

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20180301



DSK 101

- 1) MATERIAL: MAKE FROM ALUMINUM 7075-T7351 ROUND BAR PER QQ-A-225/9 (REF. DART MATERIAL SPEC M7075T73R)
- 2) FINISH: NONE
- 3) BREAK UNMARKED SHARP EDGES 0.010 TO 0.020
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED



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Hawkesbury, ON K6A 1K7
CANADA
TEL: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Part: D3488 - 042

Job No: 172905

Serial No/Batch: S070863

Revision:

Inspector:

Date: 05/13/18

THE
MAY
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